The official National Institutes of Health resource for stem cell research

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### Information on Eligibility Criteria for Federal Funding of Research on Human Embryonic Stem Cells

On August 9, 2001, at 9:00 p.m. EDT, the President announced his decision to allow Federal funds to be used for research on existing human embryonic stem cell lines as long as prior to his announcement (1) the derivation process (which commences with the removal of the inner cell mass from the blastocyst) had already been initiated and (2) the embryo from which the stem cell line was derived no longer had the possibility of development as a human being.

In addition, the President established the following criteria that must be met:

- ▶ The stem cells must have been derived from an embryo that was created for reproductive purposes;
- ▶ The embryo was no longer needed for these purposes;
- Informed consent must have been obtained for the donation of the embryo;
- No financial inducements were provided for donation of the embryo.

In order to facilitate research using human embryonic stem cells, the NIH created the Human Embryonic Stem Cell Registry, which lists the human embryonic stem cell lines—at varying stages of development—that meet the <u>eligibility criteria</u>. Listed below are entities that have developed stem cell lines that meet the President's criteria and are therefore eligible for federal funding. Please click on the name of the laboratory or company for contact information.

Name	Derivations	Available Lines
BresaGen, Inc., Athens, Georgia  * The cells in line BG04/hESBGN-04 failed to expand into undifferentiated cell cultures.	4	<b>3*</b>
Cell & Gene Therapy Research Institute (Pochon CHA University), Seoul, Korea	2	
Cellartis AB, Göteborg, Sweden  * Cell line SA03/Sahlgrenska 3 withdrawn by donor.	3	2*
CyThera, Inc., San Diego, California  * The cells failed to expand into undifferentiated cell cultures.	9	0*
ES Cell International, Melbourne, Australia	6	6
Geron Corporation, Menlo Park, California	7	
Göteborg University, Göteborg, Sweden	16	
Karolinska Institute, Stockholm, Sweden * The cells failed to expand into undifferentiated cell cultures.	6	0*
Maria Biotech Co. Ltd Maria Infertility Hospital Medical Institute, Scoul, Korea	3	
MizMedi Hospital—Seoul National University, Scoul, Korea	I	I
National Centre for Biological Sciences/Tata Institute of Fundamental Research,	2	

Bangalore, India	Ü	
Reliance Life Sciences, Mumbai, India	7	
Technion-Israel Institute of Technology, Haifa, Israel	4	3
University of California, San Francisco, California	2	2
Wisconsin Alumni Research Foundation, Madison, Wisconsin	5	5

If investigators or institutions have additional human embryonic stem cell lines that they believe are eligible for listing on the Registry, please contact NIH at <a href="mail.nih.gov">stemcell@mail.nih.gov</a>.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

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## NIH Human Embryonic Stem Cell Registry

The NIH Human Embryonic Stem Cell Registry lists the <u>derivations of stem cells that are eligible for federal funding</u>. The purpose of the Registry is to provide investigators with:

- ▶ a unique NIH Code for each cell line that must be used when applying for NIH funding and
- contact information to facilitate investigators' acquisition of stem cells.

### Providers with Lines Available for Shipping

#### BresaGen, Inc.

#### Cell Lines

NIH Code: BG01, BG02, BG03, BG04\*

Provider's Code: hESBGN-01, hESBGN-02, hESBGN-03, hESBGN-04\*

\* The cells failed to expand into undifferentiated cell cultures.

BresaGen may have sublines available for shipping. Contact BresaGen for more information about sublines. Subline BG01V is available for shipping. Contact ATCC for more information about BG01V.

#### **Contact Information**

Allan Robins, Ph.D.

Senior Vice President and Chief Scientific Officer

BresaGen, Inc.

111 Riverbend Road

Athens, GA 30605

Phone: 706-613-9878 x.158

Fax: 706-613-9879

E-mail: arobins@novocell.com

<u>Memorandum of Understanding</u> (27k PDF file; <u>get Adobe Reader</u>) <u>BresaGen 2004 hESC Methods Manual, v2.1</u> (600k PDF file; <u>get</u> Adobe Reader)

#### ▶ Table of Cell Characteristics

#### Cellartis AB

#### **Cell Lines**

NIH Code: **SA01**, **SA02**, **SA03**\*

Provider's Code: Sahlgrenska 1, Sahlgrenska 2, Sahlgrenska 3\*

\* Cell line withdrawn by donor.

Cellartis may have sublines available for shipping. Contact <u>Cellartis</u> for more information about sublines.

#### ▶ Table of Cell Characteristics

#### Contact Information

Mikael Englund, Ph.D.

Phone: +46 (0)31 758 0921

E-mail: mikael.englund@cellartis.com

Johan Hyllner, Ph.D.

Phone: +46 (0)31 758 0902

E-mail: johan.hyllner@cellartis.com

Cellartis AB

Arvid Wallgrens Backe 20 SE-413 46 Göteborg

Sweden

Fax: +46 (0)31 758 0910

Web site: <a href="http://www.cellartis.com">http://www.cellartis.com</a>

Memorandum of Understanding (59k PDF file; get Adobe Reader)

#### **ES Cell International**

Cell Lines Contact Information

NIH Code: ES01, ES02, ES03, ES04, ES05, ES06

Provider's Code: HES-1, HES-2, HES-3, HES-4, HES-

5, HES-6

ESCI may have sublines available for shipping. Contact

**ESCI** for more information about sublines.

#### ▶ Table of Cell Characteristics

Michael Vovos, IP and Licensing Manager

ES Cell International 41 Science Park Road # 04-14/15 The Gemini Singapore Science Park II

Singapore 117610 Phone: +65-6774-9570 Fax: +65-6774-5077

E-mail: <a href="mvovos@escellinternational.com">mvovos@escellinternational.com</a>
Web site: <a href="http://www.escellinternational.com">http://www.escellinternational.com</a>

Memorandum of Understanding (30k PDF file; get Adobe Reader)

#### **Publications**

http://www.escellinternational.com/research/papers.html

#### hESC Training

http://www.escellinternational.com/products/trainingsupport.html http://www.escellinternational.com/products/cellquality.html

### MizMedi Hospital—Seoul National University

#### **Cell Lines**

NIH Code: MI01

Provider's Code: Miz-hES1

MizMedi Hospital may have sublines available for shipping. Contact <u>MizMedi Hospital</u> for more information about sublines.

#### ▶ Table of Cell Characteristics

#### **Contact Information**

Sung-il Roh, M.D.

Supervisor

Medical Research Center, MizMedi Hospital

701-4, Naebalsan-dong, Kangseo-ku

Seoul, Korea

Phone: +82-2-2007-1201 Fax: +82-2-2007-1285 E-mail: roh@mizmedi.net

Web site: <a href="http://www.mizmedi.com/center/mrclab.asp">http://www.mizmedi.com/center/mrclab.asp</a>

Material Transfer Agreement (28k PDF file; get Adobe Reader)

#### Technion-Israel Institute of Technology

#### **Cell Lines**

NIH Code: **TE03**, **TE32**\*, **TE33**\*, **TE04**, **TE06**, **TE62**\*, **TE07**\*, **TE72**\*

Provider's Code: I 3, I 3.2\*, I 3.3\*, I 4, I 6, I 6.2\*, J 3\*, J 3.2\*

Technion may have sublines available for shipping. Contact <u>Technion</u> for more information about sublines.

\* These lines are not yet available for shipping.

### Contact Information

Dr. Joseph Itskovitz, M.D., D.Sc. Rambam Medical Center Department of OB/GYN

POB 9602 Haifa 31096

Israel

Phone: 972-4-8542536 Fax: 972-4-8542503

E-mail: <a href="mailto:itskovitz@rambam.health.gov.il">itskovitz@rambam.health.gov.il</a>
Web site: <a href="mailto:http://www.technion.ac.il">http://www.technion.ac.il</a>

Material Transfer Agreement (80K PDF file; get Adobe Reader)

### ► <u>Table of Cell Characteristics</u>

### University of California at San Francisco

#### **Cell Lines**

NIH Code: UC01, UC06

Provider's Code: HSF-1, HSF-6

HOGE 1 11. THE 1. CO.

#### Contact Information

Dr. Meri Firpo

Department of Obstetrics and Gynecology

Box 0720

533 Parnassus Street

UCSF may have sublines available for shipping. Contact UCSF for more information about sublines.

#### ▶ <u>Table of Cell Characteristics</u>

San Francisco, CA 94143 Phone: 415-476-4733 Fax: 415-476-6145

E-mail: <a href="mailto:firpo@itsa.ucsf.edu">firpo@itsa.ucsf.edu</a>
Web site: <a href="mailto:http://escells.ucsf.edu">http://escells.ucsf.edu</a>

Memorandum of Understanding (40k PDF file; get Adobe Reader)

Material Transfer Agreement

#### hESC Training

http://escells.ucsf.edu/Training/Trng.asp

#### Wisconsin Alumni Research Foundation (WiCell Research Institute)

#### **Cell Lines**

NIH Code: WA01, WA07, WA09, WA13, WA14

Provider's Code: H1, H7, H9, H13, H14

WiCell may have sublines available for shipping. Contact WiCell for more information about sublines.

#### ▶ Table of Cell Characteristics

#### **Contact Information**

Tammy Torbleau

Secretary, Licensing Department

Wisconsin Alumni Research Foundation (WARF)

P.O. Box 7365

Madison, WI 53707-7365
Phone: 608-263-6297
Fax: 608-263-1064
E-mail: info@wicell.org
Web site: http://www.warf.ws
Web site: http://www.wicell.org

Memorandum of Understanding (22k PDF file; get Adobe Reader)

Technical Information: Protocols & Work Flow

#### **Publications**

http://www.wicell.org/forresearchers/index.jsp?catid=11

hESC Training

http://www.wicell.org/learn/

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

This page was last modified on Friday, June 17, 2005.







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Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping

### Cell Lines Not Yet Available for Shipping

The NIH Human Embryonic Stem Cell Registry lists the derivations of stem cells that are eligible for federal funding. The purpose of the Registry is to provide investigators with:

- a unique NIH Code for each cell line that must be used when applying for NIH funding and
- contact information to facilitate investigators' acquisition of stem cells.

#### Providers with No Lines Available for Shipping

#### Cell & Gene Therapy Research Institute (Pochon CHA University)

#### Cell Lines

NIH Code: CH01\*, CH02\*

Provider's Code: CHA-hES-1\*, CHA-hES-2\*

\* These lines are not yet available for shipping.

### Cell characteristics not available from provider.

#### **Contact Information**

Hyung Min Chung, Ph.D.

Director, Cell & Gene Therapy Research Institute Pochon CHA University College of Medicine

605 Yeoksam 1-dong, Kangnam-gu

Seoul 135-081

Korea

Tel: (82) 2 3468 3391 Fax: (82) 2 3468 3393 Cell: (82) 17 208 1926

E-mail: hmchung@chacares.com

### CyThera, Inc.

#### **Cell Lines**

The cells failed to expand into undifferentiated cell cultures.

#### ▶ Table of Cell Characteristics

#### **Contact Information**

CvThera, Inc.

3550 General Atomics Court #02-503

San Diego, CA 92121 Phone: 858-455-3708 Fax: 858-455-3962

### **Geron Corporation**

#### **Cell Lines**

NIH Code: GE01\*, GE07\*, GE09\*, GE13\*, GE14\*, GE91\*, GE92\*

Provider's Code: H1\*, H7\*, H9\*, H13\*, H14\*, H9.1\*, H9.2\*

\* These lines are not yet available for shipping.

▶ Information on Cell Characteristics

### **Contact Information**

Stem Cell Request 230 Constitution Drive Menlo Park, CA 94025 Phone: 650-473-7216

Fax: 650-473-7750

E-mail: esrequest@geron.com Web site: http://www.geron.com

### Göteborg University

#### **Cell Lines**

NIH Code: SA04-SA19\*

Provider's Code: Sahlgrenska 4-Sahlgrenska 19\*

#### **Contact Information**

Professor Peter S. Eriksson Arvid Carlsson Institute

Sahlgrenska Academy at Göteborg University

\* These lines are not yet available for shipping.

#### ▶ Table of Cell Characteristics

Sahlgrenska University Hospital 413 45 Göteborg

Sweden

Phone: 46-31-3424348 Mobile: 46-708-593592 Fax: 46-31-3422437

#### Karolinska Institute

#### **Cell Lines**

The cells failed to expand into undifferentiated cell cultures.

#### ▶ Table of Cell Characteristics

#### **Contact Information**

Dr. Lars Ahrlund-Richter

Huddinge University Hospital, Novum

SE-141 86 Stockholm

Sweden

Phone: 46 9 5858 3848 Fax: 46 8 5858 3870

#### Maria Biotech Co. Ltd.—Maria Infertility Hospital Medical Institute

#### **Cell Lines**

NIH Code: MB01\*, MB02\*, MB03\*

Provider's Code: MB01\*, MB02\*, MB03\*

\* These lines are not yet available for shipping.

#### **▶** Table of Cell Characteristics

#### **Contact Information**

Jin Ho Lim, President Maria Biotech Co.

103-11, Shinseol-Dong, Dongdaemun-Gu

Seoul 130-812

Korea

Phone: (82) 2 2250-5580 Fax: (82) 2 2250-5585

E-mail: lim@mariababy.com

#### National Centre for Biological Sciences/Tata Institute of Fundamental Research

#### Cell Lines

NIH Code: NC01\*, NC02\*, NC03\*

Provider's Code: FCNCBS1\*, FCNCBS2\*, FCNCBS3\*

\* These lines are not yet available for shipping.

▶ Information on Cell Characteristics

#### **Contact Information**

Dr. Mitradas M. Panicker

University of Agricultural Sciences

**GKVK Campus** 

GKVK P.O., Bellary Road

Bangalore, 560065

India

Phone: 91-80-363-6420 Fax: 91-80-363-6662 E-mail: panic@ncbs.res.in

### Reliance Life Sciences

#### **Cell Lines**

NIH Code: RL05\*, RL07\*, RL10\*, RL13\*, RL15\*, RL20\*, RL21\*

Provider's Code: RLS ES 05\*, RLS ES 07\*, RLS ES 10\*, RLS ES 13\*, RLS ES 15\*, RLS ES 20\*, RLS ES 21\*

\* These lines are not yet available for shipping.

### , 11 0

### Cell characteristics not available from provider.

#### **Contact Information**

Dr. K.V. Submaraniam Maker Chambers IV Naariman Point Mumbai 4000021

India

E-mail: K\_v\_subramaniam@ril.com Web site: http://www.ril.com Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.







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Home > Research Topics > NIH Human Embryonic Stem Cell Registry > BresaGen, Inc.

## Provider: BresaGen, Inc.

	BresaGen, In	ac. Registered Cell L	ines (United States)	
NIH Code	BG01	BG02	BG03	BG04*
Provider's Code	(hESBGN.01)	(hESBGN.02)	(hESBGN.03)	(hESBGN.04)*
Embryo				
Source	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic
Category	Fresh	Fresh	Fresh	Fresh
IVF Status	Discarded—	Discarded—	Discarded—	Discarded—unacceptable for
	unacceptable for	unacceptable for	unacceptable for	further use
	further use	further use	further use	
Characteristics				
Passage #	> 70	> 40	> 35	< 5
Mouse Feeder Cells	Yes	Yes	Yes	Yes
Used in Isolation				
Karyotype	Normal	Normal	46XX	TBD
Stem Cell Immuno	+	+		
Markers:				
SSEA-1	-	-	-	-
SSEA-3	+	+	+	+
SSEA-4	+	+	+	+
TRA 1-60	+	+	+	TBD
TRA 1-81	+	+	+	TBD
Oct-4	+	+	+	TBD
Alkaline	+	+	+	+
Phosphatase				
Gender	Male	Male	Female	TBD
Frozen/Thawed:				
Short-term	Yes	Yes	Yes	Yes
Long-term	Yes	Yes	Yes	TBD
Pluripotent	Yes	Yes	Yes	TBD
Commercialization				
Available	43	16	25	No
				(The cells failed to expand
				into undifferentiated cell
				cultures.)
Price	\$5,000 + actual	\$5,000 + actual	\$5,000 + actual	NA
	shipping cost	shipping cost	shipping cost	
# Shipped	26	12	6	NA
Total			44	

TBD = To be Determined; NA = Not Applicable

This cell line meets the criteria for the use of human embryonic stem cells by federally funded researchers.

<sup>\*</sup> The cells failed to expand into undifferentiated cell cultures.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

This page was last modified on Thursday, June 09, 2005.







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Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Provider: Cellartis AB

### **Provider: Cellartis AB**

	Cellartis AB Registered	Cell Lines (Sweden)	
NIH Code	SA01	SA02	SA03*
Provider's Code	(Sahlgrenska 1)	(Sahlgrenska 2)	(Sahlgrenska 3)*
Embryo			
Source	IVF Clinic	IVF Clinic	IVF Clinic
Category	Frozen	Frozen	Frozen
IVF Status	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded
Characteristics			
Passage #	Passage 13 (LOT AK001, > 100 vials available)	Passage 12 (LOT AL002, > 100 vials available)	Donation withdrawn
Mouse Feeder Cells	Yes	Yes	
Used in Isolation			
Karyotype	46, XY	47, XX +13	
Stem Cell Immuno Markers:			
SSEA-1	-	-	
SSEA-3	+	+	
SSEA-4	+	+	
TRA 1-60	+	+	
TRA 1-81	+	+	
Oct-4	+	+	
Alkaline Phosphatase	+	+	
Gender	Male	Female	
Frozen/Thawed:	Yes	Yes	
Short-term	Yes	Yes	
Long-term	Yes	Yes	
Pluripotent	Yes	Yes	
Commercialization			
# Shipped	3	6	NA
Total		$\boldsymbol{g}$	

TBD = To be Determined; NA = Not Applicable

These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

\* Cell line withdrawn by donor.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

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This page was last modified on Thursday, June 09, 2005.







The official National Institutes of Health resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping > Provider: CyThera, Inc.

## Provider: CyThera, Inc.

Note: The cells failed to expand into undifferentiated cell cultures.

		Cy	Thera, Inc. Re	egistered Cell	Lines (United	States)			
NIH Code	CY12	CY30	CY40	CY51	CY81	CY82	CY91	CY92	CY10
Provider's Code	(hES-1-2)	(hES-3-0)	(hES-4-0)	(hES-5-1)	(hES-8-1)	(hES-8-2)	(hES-9-1)	(hES-9-2)	(hES-101)
Embryo									
Source	IVF Clinic								
Category	Frozen embryo								
IVF Status	Surplus, to								
	be								
	discarded								
Characteristics									
Passage #	2	3	4	5	4	3	5	2	2
Mouse Feeder Cells Used in Isolation	Yes								
Karyotype	TBD								
Stem Cell Immuno									
Markers:									
SSEA-1	TBD								
SSEA-3	TBD								
SSEA-4	TBD								
TRA 1-60	TBD								
TRA 1-81	TBD								
Oct-4	TBD								
Alkaline Phosphatase	TBD								
Gender	TBD								
Frozen/Thawed:	TBD								
Short-Term									
Long-Term									
Pluripotent	TBD								
Commercialization	NA								

TBD = To be Determined; NA = Not Applicable

### These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.







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Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Provider: ES Cell International

### **Provider: ES Cell International**

	ES Cell I	nternational Re	egistered Cell L	ines (Australia)		
NIH Code	ES01	ES02	ES03	ES04	ES05	ES06
Provider's Code	(HES-1)	(HES-2)	(HES-3)	(HES-4)	(HES-5)	(HES-6)
Embryo	/	,	/	/	/	,
Source	IVF Clinic					
Category	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen
IVF Status	Surplus, to be discarded					
Characteristics						
Passage #	TBD	TBD	TBD	TBD	TBD	TBD
Mouse Feeder Cells Used in Isolation	Yes	Yes	Yes	Yes	Yes	Yes
Karyotype	46XX	46XX	46XX	46XY	46XY	46XX
Stem Cell Immuno Markers:						
SSEA-1	-	-	-	-	-	NA
SSEA-3	+	+	+	+	+	+
SSEA-4	+	NA	+	+	+	NA
TRA 1-60	+	+	+	+	+	+
TRA 1-81	+	+	+	+	+	+
Oct-4	+	+	+	+	+	+
Alkaline Phosphatase	+	+	+	+	+	+
Gender	Female	Female	Female	Male	Male	Female
Frozen/Thawed:						
Short-Term	Yes	Yes	Yes	Yes	Yes	Yes
Long-Term	Yes	Yes	Yes	Yes	Yes	Yes
Pluripotent	ecto- endo- meso-	ecto- endo- meso-	ecto- endo- meso-	ecto- endo- meso-	ecto- endo- meso-	ecto- endo- meso-
Commercialization						
Available	> 100	> 100	> 100	> 100	> 100	> 100
Price	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
# Shipped <b>Total Shipped</b>	7	25	53 <b>1</b> 4	53 <b>47</b>	1	8

TBD = To be Determined; NA = Not Applicable

This cell line meets the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

This page was last modified on Thursday, February 10, 2005.







The official National Institutes of Health resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping > Provider: Geron Corporation

### **Provider: Geron Corporation**

Note: These lines are not yet available for shipping.

Geron Corporation Registered Cell Lines (United States)						
NIH Code	GE01	GE07	GE09	GE13	GE91 (clone)	GE92 (clone)
Provider's Code	(WiCell H1)	(WiCell H7)	(WiCell H9)	(WiCell H13)	(WiCell H9.1)	(WiCell H9.2)

### Geron responses to the NIH's request for information on cell characteristics, 6/12/2003

All of the embryonic stem cell lines in Geron's possession that are on the NIH Stem Cell Registry were derived elsewhere. Five of them were derived at the University of Wisconsin-Madison; two are clones of one of the Wisconsin lines; and two others were derived at the University of California, San Francisco. Under Geron's agreement with Wisconsin Alumni Research Foundation, we are not permitted to transfer the undifferentiated Wisconsin cell lines to third parties, except for Geron collaborators for work on projects described and directed by Geron. WiCell Research Institute does distribute the Wisconsin lines to researchers, however, and UCSF distributes the UCSF lines.

As to your specific questions: None of the lines is a frozen inner cell mass; they are all cell lines. They are all proliferating.

- The H1, H7 and H9 lines have been extensively characterized. We have recently submitted manuscripts on the detailed characterization of these three lines. We can provide you a copy of the manuscripts in confidence, or send them to you once they have been published. The lines have the expected markers to show undifferentiated status, and we have demonstrated differentiation in all three germ layers for all 3 of the lines.
- ▶ The H1, H7 and H9 lines have been passaged extensively. In most cases, over 70 passages have been achieved.
- ▶ The lines are all useful for research. Two of the lines, H1 and H7, have been tested quite extensively for the presence of potential pathogens of human and animal original, based on the specified by FDA in its Points to Consider and other guidance.

These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

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For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.







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Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping > Provider: Göteborg University

### **Provider: Göteborg University**

Note: These lines are not yet available for shipping.

Göteborg University Regi	stered Cell Lines (Sweden)
NIH Code	SA04-SA19
Provider's Code	(Sahlgrenska 4–Sahlgrenska 19)
Embryo	
Source	IVF Clinic
Category	Frozen
IVF Status	Surplus, to be
	discarded
Characteristics	
Passage #	2-3
Mouse Feeder Cells	No
Used in Isolation	
Karyotype	TBD
Stem Cell Immuno Markers:	
SSEA-1	TBD
SSEA-3	TBD
SSEA-4	TBD
TRA 1-60	TBD
TRA 1-81	TBD
Oct-4	TBD
Alkaline	TBD
Phosphatase	
Gender	TBD
Frozen/Thawed:	TBD
Short-term	
Long-term	
Pluripotent	TBD
Commercialization	NA

TBD = To be Determined; NA = Not Applicable

These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

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The official National Institutes of Health resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping > Provider: Karolinska Institute

### Provider: Karolinska Institute

Note: The cells failed to expand into undifferentiated cell cultures.

	Kare	olinska Institute R	egistered Cell Line	es (Sweden)		
NIH Code	KA08	KA09	KA40	KA41	KA42	KA43
Provider's Code	(hICM8)	(hICM9)	(hICM40)	(hICM41)	(hICM42)	(hICM43)
Embryo						
Source	IVF Clinic					
Category	Fresh	Fresh	Fresh	Fresh	Fresh	Fresh
IVF Status	Surplus, to be discarded					
Characteristics						
Passage #	Frozen, awaiting characterization					
Mouse Feeder Cells Used in Isolation	Yes	Yes	No	No	No	No
Karyotype	TBD	TBD	TBD	TBD	TBD	TBD
Stem Cell Immuno Markers:			TBD	TBD	TBD	TBD
SSEA-1	TBD	Weak				
SSEA-3	TBD	TBD				
SSEA-4	TBD	++				
TRA 1-60	TBD	TBD				
TRA 1-81	TBD	TBD				
Oct-4	TBD	TBD				
Alkaline Phosphatase	+	+				
Gender	TBD	TBD	TBD	TBD	TBD	TBD
Frozen/Thawed:	TBD	TBD	TBD	TBD	TBD	TBD
Short-term	3 weeks	3 weeks				
Long-term	3 months	3 months				
Pluripotent	TBD	TBD	TBD	TBD	TBD	TBD
Commercialization	NA	NA	NA	NA	NA	NA

TBD = To be Determined; NA = Not Applicable

These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

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Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.







The official National Institutes of Health resource for stem cell research

<u>Home</u> > <u>Research Topics</u> > <u>NIH Human Embryonic Stem Cell Registry</u> > <u>Cell Lines Not Yet Available for Shipping</u> > <u>Provider: Maria Biotech Co. Ltd.—Maria Infertility Hospital Medical Institute</u>

## Provider: Maria Biotech Co. Ltd.—Maria Infertility Hospital Medical Institute

Note: These lines are not yet available for shipping.

Maria Biotech Co. Ltd	.—Maria Infertility Hospit	al Medical Institute Register	red Cell Lines (Korea)
NIH Code	MB01	MB02	MB03
Provider's Code	(MB01)	(MB02)	(MB03)
Embryo			
Source	IVF Clinic	IVF Clinic	IVF Clinic
Category	Cryopreservation	Cryopreservation (27	Cryopreservation (27
		passages)	passages)
		In vitro (>30 passages)	In vitro (>50 passages)
IVF Status	Were to be discarded 5	Were to be discarded 5	Were to be discarded 5
	years after IVF-ET	years after IVF-ET	years after IVF-ET
	program	program	program
Characteristics			
Passage #	40	>30	>50
Mouse Feeder Cells	STO cell feeder (After		
Used in Isolation	immunosurgery, isolated	STO cell—feeder free	STO cell—feeder free
	ICM cell was cocultured	(After immunosurgery,	(After immunosurgery,
	with mouse STO cell and	isolated ICM cells were	isolated ICM cells were
	hES cell line was	cocultured with mouse	cocultured with mouse
	established)	STO cell. To grow hES	STO cell. To grow hES
		cells without a feeder layer,	cells without a feeder layer
		aged MB02 and MB03	aged MB02 and MB03
		cells that had been	cells that had been
		passaged 10 times were	passaged 10 times were
		cultured on Matrigel	cultured on Matrigel
		coated plates, respectively.)	coated plates, respectively.
Karyotype	46 XY, Normal	46, XX, Normal	46, XX, Normal
Stem Cell Immuno			
Markers:			
SSEA-1	-	-	-
SSEA-3	+	+	+
SSEA-4	+	+	+
TRA 1-60	+	+	+
TRA 1-81	+	+	+
Oct-4	+	+	+
Alkaline	+	+	+
Phosphatase			
Gender	Male	Female	Female
Frozen/Thawed:	40 passages frozen	27 passages frozen	>50 passages in vitro
		>30 passages cultured	culture
Pluripotent	Yes	Yes	Yes
Commercialization			
Available	To scientists in Korea	To scientists in Korea	To scientists in Korea

Price	Unknown	Unknown	Unknown
# Shipped	Unknown	Unknown	Unknown

### These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

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The official National Institutes of Health resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Provider: MizMedi Hospital—Seoul National University

# Provider: MizMedi Hospital—Seoul National University

MizMedi Hospital-	—Seoul National University Registered Cell Lines (Korea)
NIH Code	MI01
Provider's Code	(Miz-hES1)
Embryo	· · · · · · · · · · · · · · · · · · ·
Patient's Consent	Yes
IRB Approvals	Yes
Source	IVF Clinic
Category	Frozen embryo
IVF Status	Surplus, to be discarded
Characteristics	
Passages	125
Teratoma Foundation	Three germ layer
Embryoid Body	Three germ layer
DNA Fingerprinting	TBD
Karyotype	Normal 46 XY
Stem Cell Immuno Mar	kers:
SSEA-1	-
SSEA-3	Partially +
SSEA-4	+
TRA 1-60	+
TRA 1-81	+
Oct-4	+
Alkaline	+
Phosphatase	
Gender	Male
Frozen/Thawed:	
Short-Term	Yes
Long-Term	Yes
Pluripotent	Yes
Commercialization	
Available	1,000
Price	\$5,000
# Shipped	36

TBD = To be Determined

This cell line meets the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

This page was last modified on Thursday, June 09, 2005.







The official **National Institutes of Health** resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Cell Lines Not Yet Available for Shipping > Provider: National Centre for Biological Sciences/Tata Institute of Fundamental Research

### Provider: National Centre for Biological Sciences/Tata Institute of Fundamental Research

Note: These lines are not yet available for shipping.

National Centre for Biological Sciences/Tata Institute of Fundamental Research (India)							
NIH Code	NC01	NC02	NC03				
Provider's Code	(FCNCBS1)	(FCNCBS2)	(FCNCBS3)				

### NCBS responses to the NIH's request for information on cell characteristics

- 1. What is the status of each of your embryonic stem cell derivation listed on the NIH Embryonic Stem Cell Registry?
  - ▶ Is it a frozen inner cell mass?

Yes

▶ Is it proliferating?

It was frozen after 7 days in culture. We have not characterised them. We are obtaining experience in generating new cell lines and will thaw these when we decide we have sufficient data and experience.

▶ Has it undergone any characterization? If so, are there markers identified to show undifferentiated status? Is their evidence the cells can differentiate into any of the three germ layers (ectoderm, mesoderm, endoderm)?

No evidence for that—see above.

If the lines are proliferating, how many passages have been achieved?

See above.

2. Have these derivations been shipped to any NIH-funded researchers?

No

3. If the derivation has not been shipped, are there any plans to develop this derivation to research quality?

Yes, we hope to develop these and other lines.

4. When will they be readily available to NIH researchers?

I hope that once they are derived and characterized they would be available to the academic community.

5. Have any restrictions been placed on the use of these derivation by your national laws?

The guidelines that are being discussed at this point suggest that cells may not be shipped outside of India. My understanding is that this may be allowed in the future only on approval by a National

Committee on a case by case basis for research purposes.

#### These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

\* These lines are not yet available for shipping.

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The official National Institutes of Health resource for stem cell research

<u>Home</u> > <u>Research Topics</u> > <u>NIH Human Embryonic Stem Cell Registry</u> > <u>Technion-Israel Institute of Technology</u>

# Provider: Technion-Israel Institute of Technology

	Te	echnion-Israel	Institute of Te	echnology Registe	red Cell Lines (Is:	rael)		
NIH Code	TE03	TE32*	TE33*	TE04	TE06	TE62*	TE07*	TE72*
Provider's Code	(I 3)	(I 3.2)*	(I 3.3)*	(I 4)	(I 6)	(I 6.2)*	(J 3)*	(J 3.2)*
Embryo								
Source	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic	IVF Clinic
Category	Frozen embryo	Frozen embryo	Frozen embryo	Frozen embryo	Frozen embryo	Frozen embryo	Fresh embryo	Frozen embryo
IVF Status	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded	Surplus, to be discarded
Characteristics								
Passage #	20-30	TBD	TBD	25-35	20-30	TBD	NP	TBD
Mouse Feeder Cells Used in Isolation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Karyotype	46,XX	TBD	TBD	46,XX	46,XY	TBD	46,XY	TBD
Stem Cell Immuno Markers:								
SSEA-1	-	TBD	TBD	-	-	TBD	-	TBD
SSEA-3	-/+	TBD	TBD	-/+	-/+	TBD	-/+	TBD
SSEA-4	+	TBD	TBD	+	+	TBD	+	TBD
TRA 1-60	+	TBD	TBD	+	+	TBD	+	TBD
TRA 1-81	+	TBD	TBD	+	+	TBD	+	TBD
Oct-4	+	TBD	TBD	+	+	TBD	+	TBD
Alkaline Phosphatase	+	TBD	TBD	+	+	TBD	TBD	TBD
Gender	Female	TBD	TBD	Female	Male	TBD	Male	TBD
Frozen/Thawed:		TBD	TBD			TBD		TBD
Short-Term	Yes			Yes	Yes		Yes	
Long-Term	Yes			Yes	Yes		Yes	
Pluripotent <i>in vitro</i> (EBs)	Yes	TBD	TBD	Yes	Yes	TBD	Yes	TBD
Pluripotent <i>in vitro</i> (teratomas)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commercialization	Yes, NOGA	NA	NA	Yes, NOGA	Yes, NOGA	NA	NA	NA

	dated			dated	dated			
	9/05/2003			9/05/2003	9/05/2003			
Available	30	NA	NA	30	30	NA	NP	NA
Price	\$2,500 +	NA	NA	\$2,500 +	\$2,500 +	NA	NP	NA
	shipping			shipping	shipping			
# Shipped	39	NA	NA	NP	37	NA	NP	NA
Total				76				

TBD = To be Determined; NA = Not Applicable; NP = Not Provided

These cell lines meet the criteria for the use of human embryonic stem cells by federally funded researchers.

\* These lines are not yet available for shipping.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcell@mail.nih.gov or call 301-496-2691.

This page was last modified on Friday, June 17, 2005.







The official **National Institutes of Health** resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Provider: University of California at San Francisco

# Provider: University of California at San Francisco

University of California a		ed Cell Lines (United	
	States)		
NIH Code	UC01	UC06	
Provider's Code	(HSF-1)	(HSF-6)	
Embryo			
Source	IVF Clinic	IVF Clinic	
Category	Fresh	Fresh	
IVF Status	Surplus, to be discarded	Surplus, to be discarded	
Characteristics			
Passage #	TBD	TBD	
Mouse Feeder Cells	Yes	Yes	
Used in Isolation			
Karyotype	46XY	46XX	
Stem Cell Immuno Markers:			
SSEA-1	-	-	
SSEA-3	+	+	
SSEA-4	+	+	
TRA 1-60	+	+	
TRA 1-81	+	+	
Oct-4	+	+	
Alkaline	+	+	
Phosphatase			
Gender	Male	Female	
Frozen/Thawed:			
Short-Term	Yes	Yes	
Long-Term	Yes	Yes	
Pluripotent	Yes	Yes	
Commercialization			
Available	45	36	
Price	\$5,000	\$5,000	
# Shipped	8 (since July 2004)	10 (since July 2004)	
Total		64	

TBD = To be Determined; NA = Not Applicable

This cell line meets the criteria for the use of human embryonic stem cells by federally funded researchers.

In your grant applications please use the NIH codes, rather than the providers' codes, to identify the cell lines.

Information about the cell line comes from the provider and has not been independently verified by the NIH.

For any questions about the registry, please e-mail stemcel@mail.nih.gov or call 301-496-2691.

This page was last modified on Thursday, June 09, 2005.







The official **National Institutes of Health** resource for stem cell research

Home > Research Topics > NIH Human Embryonic Stem Cell Registry > Provider: Wisconsin Alumni Research Foundation

# Provider: Wisconsin Alumni Research Foundation (WiCell Research Institute)

Wisconsin Alumni Research Foundation (WiCell Research Institute)  Registered Cell Lines (United States)						
NIH Code	WA01	WA07	WA09	WA13	WA14	
Provider's Code	(H1)	(H7)	(H9)	(H13)	(H14)	
Embryo	,	,	,	,	, ,	
Source	IVF Clinic					
Category	NA	NA	NA	NA	NA	
IVF Status	Surplus, to be discarded					
Characteristics						
Passage #	20-24	20-24	20-24	Not provided	20-24	
Mouse Feeder Cells Used in Isolation	Yes	Yes	Yes	Yes	Yes	
Karyotype	46XY	46XX	46XX	46XY	46XY	
Stem Cell Immuno Markers:						
SSEA-1	-	-	-	-	-	
SSEA-3	+	+	+	+	+	
SSEA-4	+	+	+	+	+	
TRA 1-60	+	+	+	+	+	
TRA 1-81	+	+	+	+	+	
Oct-4	+	+	+	+	+	
Alkaline Phosphatase	+	+	+	+	+	
Gender	Male	Female	Female	Male	Male	
Frozen/Thawed:						
Short-term	Yes	Yes	Yes	Yes	Yes	
Long-term	Yes	Yes	Yes	Yes	Yes	
Pluripotent	Yes	Yes	Yes	Yes	Yes	
Commercialization						
Available	520	175	600	200	250	
Price:						
In U.S.	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
Outside U.S.	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	
# Shipped	175	15	67	4	5	
Total			266			

TBD = To be Determined; NA = Not Applicable

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